

CSCE 222 [505] Discrete Structures for Computing
Fall 2015 – Philip C. Ritchey

Problem Set 10

Due dates: Electronic submission of L^AT_EX and PDF files of this homework is due on **4 December 2015 (Friday) before 11:30 a.m.** on gradescope (<http://gradescope.com>).

Names of Group Members
YOUR NAME
COLLABORATOR 1
COLLABORATOR 2

Resources. (All people, books, articles, web pages, etc. that have been consulted when producing this homework)

Problem 1. (12 points) Section 13.3, Exercise 26.

Solution.

Problem 2. (12 points) Construct a NFA that recognizes the language

$$L = \{w \in \{a, b\}^* \mid w \text{ starts and ends with the same symbol}\}$$

Solution.

Problem 3. (12 points) Section 13.3, Exercise 52

Solution.

Problem 4. (12 points) Section 13.3, Exercise 46 (give your answer as a regular expression)

Solution.

Problem 5. (12 points) Section 13.4, Exercise 12c

Solution.

Problem 6. (12 points) Section 13.4, Exercise 6

Solution.

Problem 7. (12 points) Section 13.5, Exercise 8

Solution.

Problem 8. (12 points) Section 13.5, Exercise 16

Solution.

Problem 9. (4 points) Section 13.5, Exercise 30

Solution.

Aggie Honor Statement: On my honor, as an Aggie, I have neither given nor received any unauthorized aid on any portion of the academic work included in this assignment. Furthermore, I have disclosed all resources (people, books, web sites, etc.) that have been used to prepare this homework.

Checklist:

1. Did you type your full name and that of all collaborators?
2. Did you abide by the Aggie Honor Code?
3. Did you solve all problems and start a new page for each?
4. Did you submit your PDF file?